Making Product & CAD Selection Fast & Easy for Customers

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Marketing Director

www.powerjacks.com
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What We Do

- Power Jacks is an engineering company focused on providing customers with the best lifting & positioning solutions for applications in Industrial Automation, Energy, Defence, Medical, Transport, and the Civil Engineering sectors.

- UK’s Largest Manufacturer of:
  - screw jacks,
  - electric linear actuators,
  - spiral bevel gearboxes,
  - jacking systems
  - planetary roller screws,

- Engineering service across our entire range of products that means customers get exactly what they need.

- Products are supplied globally as individual units or as complete motion systems.
History of Power Jacks

- 1988 – Power Jacks Ltd Starts
- 2002 - Power Jacks Group
  - Power Jacks Acquire: Precision Actuation Systems, Neeter Drive, Fortune Engineering and Youngs Lifting.
- 2009 – Power Jacks China Sales Office Opens in Shanghai
- 2010 – Power Jacks Wins Queen’s Award for International Trade
  - Power Jacks’ award marks the company’s considerable global growth with overseas sales increasing by 246%.
- 2011 – Ellon HQ & Factory Opened
  - Power Jacks multi-million pound headquarters.
History of Power Jacks

- **2016 – New Power Jacks GmbH**
  - New German Sales Office Opens in Wangen im Allgäu Southern Germany

- **2017 – New Midlands Office**
  - New UK Business Development Office Opens in Birmingham

- **2017 – New Power Jacks (India) Pvt Ltd**
  - New India Sales Office Opens Vadodara in Gujarat province in India

- **2018 Power Jacks Ltd Celebrates 30 Years of Business.**
Facilities

- **Modern Manufacturing facility**
  - CAD/CAM/CAE design and manufacture
  - Advanced ERP computer system
  - State of the Art CNC Machining
  - Team of 60 highly trained people.

- **Quality**
  - Quality BS EN ISO 9001
  - Health & Safety OHSAS 18001
  - Environmentally friendly ISO 14001

- **Philosophy**
  - Quality products that offer reliability, performance and value for money.
  - Unsurpassed experience of linear motion products, their applications & our ability to engineer special products to give our customers an advantage.
A network of 30 distributors around the world and customers in 80 countries.
www.powerjacks.com a Global Engineering Resource

- **Info 24/7 365 days/year**
  - 3D & 2D CAD Models
  - Brochures & Datasheets
  - Maintenance Manuals
  - Answers to FAQs
  - Application examples
  - Send RFQs & Enquiries

- **3D Product Configurator & Selector**
  - Configure, view and download CAD models in 3D or 2D in over 30 different formats.
  - Engineers can quickly and easily put the exact model into their assembly.
  - Use the Product Selector to recommend a product when you don’t know what to choose or how to choose it.
  - Request a quote for the model you’ve configured or selected.
Products - Overview

Designed & Manufactured by Power Jacks

Screw Jacks

Screw Jack Systems

Bevel Gearboxes

Linear Actuators

Planetary Roller Screws

Load Monitoring

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Products - Screw Jacks

- Machine Screw Jacks
- Ball Screw Jacks
- Roller Screw Jacks

- Single Face Design (E-Series)
- Cubic Design (C-Series)
- Stainless Steel Design (E-Series version)
- Subsea Design (U-Series)

- Capacities 5kN – 2000kN (0.5Te – 200Te) as Standard
- Capacities up to 35000kN (3500Te) on request
- Translating screw designs
- Rotating screw designs.

- Special designs available.
Products – Jacking Systems

• Connect Screw Jacks in systems so multiple units can be operated & controlled together.

• Jacking system configurations can be built in many formats with the use of bevel gearboxs, motors, reduction gearboxs, drive shafts, couplings, plummer blocks and motion control devices.
Products – Electric Linear Actuators

- Machine Screw Actuators
- Ball Screw Actuators
- Roller Screw Actuators

- Motor mounted Parallel to ram
- Motor mounted In-Line with ram
- Motor mounted 90° to ram

- Capacities up to 400kN (40Te) as Standard
- Capacities up to 1000kN (100Te) on request
- Linear Speeds up to 7000 mm/min as standard
- Linear Speeds up to 50,000 mm/min on request

- Special Designs Available, including full stainless steel.
Products - Bevel Gearboxes

- Solid Shaft
- Hollow Shaft
- 2-way, 3-way, 4-way

- Ultra-Compact Design (Range-N)
- Subsea Design (Range-U)
- Monobloc Design (Range-P)

- Gear Ratios 1:1, 1.5:1, 2:1, 3:1 and 4:1
- Torque Rating to 7000Nm as standard
- Torque Rating to 20,000Nm on request

- Special Designs Available, including full stainless steel.
Products – In Motion

Screw Jacks
Input: Rotary Motion & Torque
Output: Linear Motion & Force

Linear Actuator
Input: Rotary Motion & Torque
Output: Linear Motion & Force

Screw Jacks
Input: Rotary Motion & Torque
Output: Linear Motion & Force

Bevel Gearbox
Input: Rotary Motion & Torque
Output: Rotary Motion & Torque
Products – Typical Automation

- Tilt / Pivot
- Lift / Lower
- Position
- Roll / Slide
- Open / Close
- Tension
- Lock / Unlock
Applications – Example Overview

Steel
Heavy Plate Steel

Beverage Can
Can Wash Automation

Nuclear Research
Neutron-Target Door

Metal Processing
Straightening Machine

Satcom
Elevation & Azimuth

Flood Defence
Bridge Automation

Automotive
Suspension Testing

Railway
Maglev Points Control

Agriculture
Compost Roof Lift

Aerospace
Maintenance Platform

Stadium
Wimbledon Roof

Oil & Gas
Subsea Riser Positioning

www.powerjacks.com
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Website - Generating Interest & Understanding

Traditional
- Product Detail with 3D CAD Renders of Products
- Product FAQs
- Application Examples
- Downloads including Brochures & Datasheets
- Videos to watch

NEW
- Interactive 3D Preview of Product using CADENAS
  - No portal registration required.
  - 3D Preview on product content web page.
  - View an example product from all angles.
  - Increases product knowledge.
  - Increases familiarity with CADENAS viewer.
3D Visualisation For All

- 3D Product Preview Visualisation via Web Pages and NOT via a Portal.

Deep Links with Portlet Configuration
Portal - Access

- Access via Power Jacks or PARTcommunity Portals
Power Jacks Portal

Dashboard

Hello Bruce, you last logged in on 26-02-2018.

Profile
Manage your personal details
- Update security settings

Engineering
3D CAD configurator and product selector.
- CAD configurator
- Product selector

Marketing Hub
Email preferences
- Update

Help
Get help and support

User Hub
Engineering Hub
Marketing Hub
Support Hub
Catering for “U2 Access”

“Still haven’t found what I’m looking for?” then use:

- **CAD Configurator**
  - User knows which product to select.
  - Navigate to product, set variables & download CAD.

- **Product Selector**
  - User needs help
  - Only has application detail
  - Is not familiar with products & how to select
  - Enter application detail into product selector & it recommends product.
  - Link product to related CAD & Data Sheet Content
Portal – CAD Selection

- CAD Configurator
Portal – CAD Selection

- Graphical Selection
CAD - Selection

- Configure Product

Product Code

Variables for each segment of product code

Dynamic Dimensions

Branded CAD Model

Call to Action
Portal – Bevel Gearbox Product Selector

- Navigate from Dashboard or from CAD Configurator
Portal – Bevel Gearbox Product Selector

- Enter the Application Details

**Basic Details**

- **Gear Ratio**: 1:1
- **Input**:
  - Speed: 1500 rpm
  - Torque: 35.7 Nm
  - Power: 5.608 kW
- **Output**:
  - Speed: 1500 rpm
  - Torque: 35 Nm
  - Power: 5.496 kW
- **Shaft Type**: Solid
- **Shaft Configuration**:
  - 2-Way
  - 2-Way Reverse
  - 3-Way
  - 3-Way Reverse
  - 4-Way

**Extended Details**

- **Mechanical Service Factor**: 1.7188
  - Note: Please input the required Mechanical Service Factor if known, otherwise use the selection criteria below.
- **Shock Load Factor**
  - Gear Application: Conveyor Belts
  - Input Power Source: Electric Motor
  - Operating Hours: > 10
  - Shock Load Factor: 1.25
- **Number of Starts/Hour**: up to 60
- **Transmission Factor**: Chains
- **Duty Cycle (% per Hour)**: 60
- **Ambient Temperature (°C)**: 25

Reset | Service Factors (optional) | Search | Back | Search
Portal – Bevel Gearbox Product Selector

- Get The Product Recommendation

**Product Code:**
Part Number: N370S30-10M05-0000-0000-000000

**Product Summary:**
- Description: Range-N Bevel Gearbox
- Product Code: N37
- Shaft Type: Solid Shaft
- Configuration: 3-Way Standard Gear Configuration
- Gear Ratio: 1:1 Gear Ratio

**CAD & PDF Download:**
- Download PDF Fact Sheet
- Download 2D/3D CAD Files
- Add to Shopping Cart

**Product Preview:**

**Calculation Results:**

<table>
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<th>Input Speed (rpm)</th>
<th>Input Torque (Nm)</th>
<th>Input Power (KW)</th>
<th>Output Speed (rpm)</th>
<th>Output Torque (Nm)</th>
<th>Output Power (KW)</th>
<th>Mechanical Service Factor</th>
<th>Limiting Thermal Power (KW)</th>
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Portal – Downloads

- 3D & 2D CAD Models / Drawings
- PDF “Configured” Data Sheets
Current Status

- CAD Configurator
  - C-Series Screw Jacks
  - E-Series Screw Jacks
    - Machine Screw
    - Stainless Steel
    - Ball Screw
  - S-Series Screw Jacks
  - Range-N Bevel Gearboxes
  - EMA Actuators
  - Load Links

- Product Selector
  - Range-N Bevel Gearboxes

- 3D Preview
  - E-Series Screw Jacks
Next Step

- **CAD Configurator**
  - Increase Model Options

- **Product Selector**
  - Screw Jack

- **3D Preview**
  - C-Series Screw Jacks
  - Range-N Bevel Gearboxes
Thank You

PRECISION SCREW JACKS. JACKING SYSTEMS.
ELECTRIC LINEAR ACTUATORS. SPIRAL BEVEL GEARBOXES.